MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

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WAR DEPARTMENT,

OFFICE OF THE CHIEF SIGNAL OFFICER,

DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to March 20th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 135 Signal Service stations and 13 Canadian stations, as telegraphed to this office; 192 monthly journals and 165 monthly means from the former, and 13 monthly means from the latter; 234 monthly registers from Voluntary Observers; 57 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; Marine Reports through the co-operation of the New York Herald Weather Service; abstracts of Ships' Logs, furnished by the publishers of the New York Maritime Register; monthly reports from the local Weather Services of Iowa, Nebraska and Missouri, and of the Central Pacific Railway Company; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

To illustrate the subject of the distribution of mean atmospheric pressure over the United States and Canada for the month of February, 1882, chart No. II has been prepared, upon which are traced the lines of equal barometric mean values. The areas of lowest mean pressure 30.00, occupy the northern portion of the Upper Lake Region and the eastern half of the Canadian Maritime Provinces. The isobar of 30.05 runs southeastward from northern Dakota to southern Iowa and thence northeastward to the Province of Ontario; with a break in the line at Rockliffe, the isobar commences again near the mouth of the St. Lawrence and runs southward off the coast of Maine. Areas of 30.05 are also found in the lower portion of the Rio Grande Valley and in the North Pacific Coast Region. Throughout the remainder of the country the pressure ranges from 30.07 to 30.24. Compared with the previous month the position of the areas of lowest mean pressure remain unchanged, but the barometer has fallen about 0.05 inch in the Lake Superior region and risen about the same degree in the Maritime Provinces, accompanying a deficiency in the former and an excess in the latter region.

Departures from the Normal Values for the Month.—Compared with the means of previous years, the mean pressure for February, 1882, presents rather unusual features in the disposition and extent of areas of excess and deficiency. The central portion of the country, between the Ohio and Mississippi rivers on the east and the Rocky Mountains on the west, is occupied by a decided area of deficiency, the departures ranging from 0.01 to 0.14 inch, increasing with the latitude. From the western border of this area to the Atlantic Coast, departures of excess prevail, ranging from 0.01 to 0.13 inch. Only four stations, Eastport, Erie, Columbus, and Nashville, report the former departure, the range in general being from 0.04 to 0.09 inch; exceptional departures occur as follows: Mt. Washington, 0.13 inch; Morgantown, 0.12 inch. From the eastern border of the area of deficiency to the Pacific coast, the departures of excess range in the extremes from 0.01 to 0.09 inch, but generally from 0.04 to 0.08 inch. The following stations report a normal condition; Indianola, Galveston and Port Huron.

Barometric Ranges.—The range of pressure for the present month has generally varied from 0.8 to 1.3 inches, and in the extremes from 0.42 inch at Key West to 1.58 inches at St. Vincent, Minn., and Provincetown, Mass. The ranges increase with the latitude throughout the entire country and along the southern boundary of the United States from California and Florida inward to the maximum in Texas. Throughout the various districts the monthly barometric ranges varied as follows: New England, 1.12 inches on summit of Mt. Washington to 1.49 inches at Thatcher's Island and Eastport, and 1.58 inches at Provincetown; Middle Atlantic States, 1.15 inches at Lynchburg to 1.28 inches at Williamsport and 1.47 inches at Atlantic City; South Atlantic States, 0.84 inch at Jacksonville to 1.08 inches at Atlanta and Augusta and 1.42 inches at Hatteras and Kittyhawk; Florida Peninsula, 0.42 inch at Key West to 0.52 inch at Punta Rassa and 0.73 inch at Cedar Keys; Eastern Gulf States, 0.8 inch at Pensacola to 0.92 inch at Vicksburg and 0.93 inch at Montgomery; Western Gulf States, 0.6 inch at Mason to 0.78 inch at Shreveport, 0.97 inch at Little Rock and 0.98 inch at Fort Gibson; Rio Grande Valley, 0.62 inch at Uvalde to 0.72 inch at Rio Grande and 0.74 inch at Castroville; Ohio Valley and Tennessee, 0.95 inch at Nashville to 1.09 inches at Louisville, 1.17 inches at Pittsburg and 1.26 inches at Champaign; Lower Lake Region, 1.23 inches at Toledo to 1.33 inches at Buffalo and Detroit and 1.43 inches at Port Huron; Upper Lake Region, 1.18 inches at Chicago to 1.36 inches at Duluth, 1.37 inches at Marquette and Grand Haven and 1.56 inches at Alpena; Upper Mississippi Valley, 0.89 inch at Des Moines to 1.16 inches at St. Louis and 1.27 inches at Madison; Missouri Valley, 0.9 inch at Leavenworth to 0.92 inch at Omaha and Springfield and 1.12 inches at Huron; Extreme Northwest, 1.24 inches at Moorhead to 1.32 inches at Fort Stevenson and 1.58 inches at St. Vincent; Northern Slope, 0.54 inch at Cheyenne to 0.77 inch at Helena, 1.03 inches at Fort Keogh and 1.16 inches at Fort Assinnaboine; Middle Slope, 0.55 inch at Denver to 0.7 inch at Fort Elliott and 0.81 inch at Dodge City; Southern Slope, 0.46 inch at El Paso to 0.66 inch at Coleman and 0.89 inch at Henrietta; Northern Plateau, 0.87 inch at Fort Missoula to 1.01 inches at Lewiston and Dayton and 1.10 inches at Umatilla; Middle Plateau, 0.83 inch at Pioche to 0.89 inch at Winnemucca and 0.9 inch at Salt Lake City; Southern Plateau, 0.42 inch at Fort Grant to 0.48 inch at